



THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of

Michiaki Sakamoto

Serial No.: 09/585,472

Group Art Unit: 2871

Filed: June 2, 2000

Examiner: Rude, T.

For: ACTIVE MATRIX LIQUID CRYSTAL DISPLAY DEVICE AND
MANUFACTURING METHOD THEREOF

Honorable Commissioner of Patents
Alexandria, Virginia 22313-1450

STATEMENT OF SUBSTANCE OF INTERVIEW

Sir:

In response to the requirement in 37 C.F.R. §1.2, 37 C.F.R. §1.133, and MPEP §713.04, that Applicant provides a statement of the substance of an interview, Applicant hereby submit(s) the following summary.

Applicant gratefully acknowledges Examiners Rude and Chowdhury for taking time from their busy schedules to conduct a personal interview on August 23, 2004, for the above-referenced Application. The interview was courteous and professional, and it is believed by Applicant's representative that prosecution has been advanced because of this interview.

Concerning the substance of the interview, Applicant's representative presented a summary of the present invention as described, for example, by independent claim 1. The discussion focused on the aspect of the present invention in which the inventor has realized that a problem exists when color filter material is used around the region for the contact via to the drain of the thin film gate transistor in a liquid crystal display.

More specifically, the inventor discovered that there are problems at the point of

attachment to the transistor drain if the color filter material is not completely cured during the photolithographic stages. To overcome this problem, the inventor realized that the thickness of the color filter material is a critical parameter in the region of the transistor drain contact. That is, the inventor realized that, not only must the color filter material be sufficiently thick in the region of the color filter, in order to obtain adequate chromatic characteristic for the color filter, but it must also be sufficiently thin in the region of the transistor drain region, in order to permit complete curing during photolithographic exposure in the fabrication stages of the contact via.

Therefore, the present invention recognizes that there are two competing requirements for the thickness of the color filter material layer.

The discussion then shifted to the rejection in the Office Action dated March 22, 2004, which relies upon US Patent 5,994,721 to Zhong et al., as modified by US Patent 6,208,399 to Ohta et al. Applicant's representative argued that Zhong, by reason of already being a fully-functioning LCD, would not require any modifications. More specifically, it was argued that there is no indication on record that the color filter material was considered in the art as being a layer that requires additional moisture protection.

The Examiner responded that he considered that this material is known to be permeable over time to moisture, so that, if the LCD were to be, for example, designed to a military standard that requires a longer display lifetime, it would require an additional protective layer over the thin film transistor.

Applicant's representative then pointed out that the present invention is more than merely adding an additional layer over the thin film transistor, since it teaches that there are

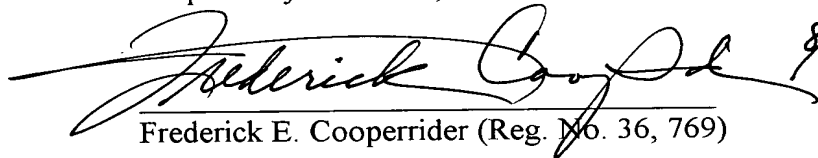
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Interview Summary

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two conflicting requirements for the thickness of the color filter material and that achieving one of the two requirements does not guarantee the satisfaction of the second requirement. That is, the present invention contributes to the art the teaching that the thickness of the color filter material is a parameter having a critical range of values to achieve two different effects at the same time.

The Examiner is understood as agreeing that he would give consideration to this argument in his next evaluation.

Respectfully submitted,

 # 36,769 8/24/04
Frederick E. Cooperrider (Reg. No. 36, 769)